

ABSTRACT OF THE DISCLOSURE

A method for production of mixed alcohols by using a sulfided transition metal catalyst selected from Group VI metals; nano-sizing the metal catalyst during its synthesis; suspending the catalyst in solvents to form a slurry; adding, a sulfur containing material to extend catalyst life; and contacting this slurry with carbon monoxide and hydrogen at 200 - 325°C and 500 – 3000 psig pressure.